

***FlyBy Math™* Alignment**
Minnesota Academic Standards
Mathematics

Strand I. MATHEMATICAL REASONING

Standard: Apply skills of mathematical representation, communication and reasoning throughout the remaining four content strands.

Benchmarks	<i>FlyBy Math™</i> Activities
1. Communicate, reason and represent situations mathematically.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes. --Predict outcomes and explain results of mathematical models and experiments.
3. Evaluate the reasonableness of the solution by considering appropriate estimates and the context of the original problem.	--Predict outcomes and explain results of mathematical models and experiments.
5. Express a written problem in suitable mathematical language, solve the problem and interpret the result in the original context.	--Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system.
6. Support mathematical results using pictures, numbers, and words to explain why the steps in a solution are valid and why a particular solution method is appropriate.	--Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system.
7. Organize, record and communicate math ideas coherently and clearly.	--Predict outcomes and explain results of mathematical models and experiments.

Strand III. PATTERNS, FUNCTIONS AND ALGEBRA

Sub-Strand A. Patterns and Functions

Standard: Understand and describe patterns in numbers, shapes, tables and graphs.

Benchmarks	<i>FlyBy Math™</i> Activities
1. Identify patterns in numbers, shapes, tables, and graphs and explain how to extend those patterns.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

Strand IV. DATA ANALYSIS, STATISTICS AND PROBABILITY

Sub-Strand A. Data and Statistics

Standard: Represent data and use various measures associated with data to draw conclusions and identify trends.

Benchmarks

3. Collect data using measurements, surveys or experiments and represent the data with tables and graphs with labeling.

FlyBy Math™ Activities

--Conduct simulation and measurement for several aircraft conflict problems.

--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.